WHAT IS CLAIMED IS:

1. A sensing device comprising:

a vessel;

a plurality of sensor beads located within said vessel to form interstitial spaces therethrough; and

a plurality of biomolecules bound to at least a portion of said plurality of beads, each of said biomolecules having a fluorescent tag.

2. The sensing device of claim 1, wherein said vessel has a width of 250 μm to 500 μm.

3. The sensing device of claim 1, wherein said vessel has a length of 0.5 cm to 3.0 cm.

4. The sensing device of claim 1, wherein said vessel has a depth of 50 μm to 100 μm.

5. The sensing device of claim 1, wherein said plurality of beads are located in microfluidic channels in said vessel.

6. The sensing device of claim 5, wherein said microfluidic channels have a width of 10 μm to 500 μm.

7. The sensing device of claim 1, wherein said microfluidic channels are comprised of optically transparent material.

8. The sensing device of claim 7, wherein said optically transparent material comprises glass.

9. The sensing device of claim 7, wherein said optically transparent material comprises quartz.

10. The sensing device of claim 7, wherein said optically transparent material comprises a polymer.

11. The sensing device of claim 10, wherein said polymer comprises poly(dimethylsiloxane).

12. The sensing device of claim 1, wherein said plurality of sensor beads comprises at least two different types of sensor beads.

13. The sensing device of claim 1, wherein said plurality of biomolecules comprises at least two different kinds of biomolecules.

14. The sensing device of claim 13, wherein each of said two different kinds of biomolecules includes a different fluorescent tag.

15. The sensing device of claim 14, wherein said sensing device comprises at least two sensing regions, each of said sensing regions including one of said at least two different kinds of biomolecules.

16. The sensing device of claim 15, wherein said vessel includes obstructive features therein for preventing flow of said sensor beads between said at least two sensing regions.

17. The sensing device of claim 13, wherein said plurality of beads comprise at least two different kinds of beads and each of said different kinds of biomolecules are bound to a respective type of said at least two different types of sensor beads.

18. The sensing device of claim 1, further comprising spacer beads within said vessel.

19. The sensing device of claim 1, wherein said sensing device further comprising foundation beads within said vessel.

20. The sensing device of claim 19, wherein said foundation beads are comprised of glass or a metallic.

21. The sensing device of claim 20, wherein said foundation beads have a diameter of 30 μm to 1000 μm.

22. The sensing device of claim 1, wherein said vessel includes obstructive features therein for preventing said sensor beads from flowing along said vessel.

23. The sensing device of claim 22, wherein neighboring obstructive features of said obstructive features are located 5 μm to 20 μm from each other.

24. The sensing device of claim 1, wherein said sensor beads are 1 μm to 1000 μm in diameter.

25. The sensing device of claim 1, wherein said sensor beads are coated with at least one coating of said plurality of biomolecules.

26. The sensing device of claim 25, wherein bound biomolecules of said plurality of biomolecules are bound to said plurality of bead by biotin.

27. The sensing device of claim 1, wherein said interstititial spaces each has a volume of 1 nL to 1000 nL.

28. A method for detecting the binding of two biomolecules comprising the following steps:

providing a plurality of first biomolecules, each of said first biomolecules having a first fluorescent tag, each of said first biomolecules being bound to a respective substrate of a plurality of substrates;

providing a plurality of second biomolecules, each of said second biomolecules having a second fluorescent tag;

binding at least portion of said second biomolecules to at least a portion of said first biomolecules to form complexes, wherein said plurality of first biomolecules and said plurality of second biomolecules prior to said binding step have a pre-complexing total fluorescence and wherein said complexes and free second biomolecules after said binding step have a post-complexing total fluorescence; and

detecting any difference between said pre-complexing total fluorescence and said post-complexing total fluorescence.

29. The method of claim 28, wherein each said plurality of substrates comprises beads.

30. The method of claim 29, wherein said beads comprise poly(dimethylsiloxane).

31. The method of claim 29, wherein said beads have a diameter of 0.1 μm to 1000 μm.

32. The method of claim 28, wherein said first biomolecules comprise at least two different types of first biomolecules.

33. The method of claim 28, wherein said plurality of substrates comprises at least two different types of beads, and each of said at least two different types of first biomolecules are bound to a respective one of said at least two different types of beads.

34. The method of claim 28, wherein said second biomolecules comprises at least two different types of second biomolecules.

35. The method of claim 28, wherein said second fluorescent tag comprises at least two different fluorescent tags bound to a respective one type of said at least two different types of second biomolecules.

36. The method of claim 28, wherein said first biomolecules are capable of detecting an epitope of said second biomolecules.

37. The method of claim 36, wherein said epitope comprises SEQ ID NO: 1.

38. The method of claim 36, wherein said binding step takes place in the presence of calcium ions.

39. The method of claim 28, wherein energy is transferred between said first fluorescent tag and said second fluorescent tag, wherein said first fluorescent tag and said second fluorescent tag are at a distance of 10 μm to 200 μm from each other.

40. The method of claim 28, wherein at least one member selected from the group consisting of said first fluorescent tag and said second fluorescent tag comprises a donor molecule having an emission spectrum and the other member of said group comprises an acceptor molecule having an absorption spectrum, and wherein said emission spectrum and said absorption spectrum overlap.

41. The method of claim 28, wherein the detection is done using a flow cytometer.

42. The method of claim 28, wherein the detection is done using a spectrophotometer.

43. The method of claim 28, wherein the detection is done using a microscope.

44. The method of claim 28, wherein, any difference between said pre-complexing total fluorescence and said post-complexing total fluorescence is detected using fluorescence resonance energy transfer.

45. The method of claim 28, further comprising the step of determining the amount of said second biomolecule based on the detected difference between said pre-complexing total fluorescence and said post-complexing total fluorescence.

46. The method of claim 28, wherein said pre-complexing total fluorescence and said post-complexing total fluorescence is measured using fluorescence resonance energy transfer.

47. A sensing device comprising:

a suspension of a plurality of sensor beads; and

a plurality of biomolecules bound to at least a portion of said plurality of beads, each of said biomolecules having a fluorescent tag.

48. The sensing device of claim 47, wherein said plurality of sensor beads comprises at least two different types of sensor beads.

49. The sensing device of claim 47, wherein said plurality of biomolecules comprises at least two different kinds of biomolecules.

50. The sensing device of claim 49, wherein each of said two different kinds of biomolecules includes a different fluorescent tag.

51. The sensing device of claim 47, wherein said sensor beads are 1 μm to 1000 μm in diameter.